

IN THE CLAIMS

Claims 1-46 are re-presented.

**PENDING CLAIMS**

1. A bus system, comprising:
 - a dynamically configurable bus;
 - a first bus device on the bus at a first virtual address and at a first physical address on the bus;
 - a second bus device on the bus at a second virtual address and a second physical address; and
 - a map of the first and second virtual addresses to the first and second physical addresses, respectively, encoded on a program storage medium, the map being accessible over the bus.
2. The bus system of claim 1, wherein at least one of the first and second virtual addresses is a guaranteed unique identifier.
3. The bus system of claim 1, wherein the map resides on at least one of the first and second bus devices.
4. The bus system of claim 1, wherein at least one of the first and second bus devices is a bus manager.

5. The bus system of claim 4, wherein the bus manager comprises a workstation or a personal computer.
6. The bus system of claim 4, wherein the map is stored on the bus manager.
7. The bus system of claim 1, wherein the bus system implements a network.
8. The bus system of claim 1, wherein at least one of the first and second bus devices is a printer, a plotter, a workstation, a personal computer, a video camera, or a magnetic tape drive.
9. The bus system of claim 1, wherein the map is encoded as an array, a doubly linked list, a tree, a table, or a file.
10. The bus system of claim 1, wherein the map is bi-directional.
11. The bus system of claim 1, wherein the bus includes:
 - a first dynamically configurable bus; and
 - a second dynamically configurable bus.
12. The bus system of claim 11, wherein the first and second buses are coupled by a bridge.

13. A bus system, comprising:
 - a dynamically configurable bus; and
 - a plurality of bus devices coupled to the bus, each of the plurality of bus devices having a virtual address and a physical address, at least one of the plurality of bus devices mapping at least one virtual address to the respective physical address for the bus device associated with the respective physical address.
14. The bus system of claim 13, wherein at least one virtual address is a guaranteed unique identifier.
15. The bus system of claim 13, wherein a map resides on at least one of the bus devices.
16. The bus system of claim 13, wherein at least one of the bus devices is a bus manager.
17. The bus system of claim 16, wherein the bus manager comprises a workstation or a personal computer.
18. The bus system of claim 16, wherein a map is stored on the bus manager.
19. The bus system of claim 13, wherein the bus system implements a network.

20. The bus system of claim 13, wherein at least one of the bus devices is a printer, a plotter, a workstation, a personal computer, a video camera, or a magnetic tape drive.
21. The bus system of claim 13, wherein a map is encoded as an array, a doubly linked list, a tree, a table, or a file.
22. The bus system of claim 13, wherein a map is bi-directional.
23. The bus system of claim 13, wherein the bus includes:
 - a first dynamically configurable bus; and
 - a second dynamically configurable bus.
24. The bus system of claim 23, wherein the first and second buses are coupled by a bridge.
25. A program storage device encoded with instructions that, when executed by a computer, map a plurality of virtual addresses to respective physical addresses for a plurality of bus devices in a dynamically configurable bus system upon detecting a configuration event.
26. The program storage device of claim 25, wherein each virtual address and its respective physical address is mapped into at least one of an array, a doubly linked list, a tree, a table, and a file.

27. The program storage device of claim 25, wherein the mapping of a plurality of virtual addresses to respective physical addresses includes:

querying each of the plurality of bus devices other than a bus manager;
identifying each queried device from configuration information therefor;
ascertaining the virtual address and the physical address for each identified device;
constructing a map of the virtual address for each of the plurality of bus devices to the physical address therefor; and
storing the map.

28. The program storage device of claim 27, wherein the map comprises at least one of an array, a doubly linked list, a tree, a table, and a file.

29. The program storage device of claim 25, wherein the dynamically configurable bus system comprises a first dynamically configurable bus and a second dynamically configurable bus and the mapping a plurality of virtual addresses to respective physical addresses is performed only for bus devices on one of the first and second dynamically configurable buses experiencing a configuration event.

30. The program storage device of claim 25, wherein the encoded instructions, when executed, map the virtual addresses to respective physical addresses bi-directionally.

31. The program storage device of claim 25, wherein at least one mapped virtual address is a guaranteed unique identifier.

32. The program storage device of claim 25, wherein at least one of the plurality of bus devices is a bus manager.

33. A method comprising:

querying each of a plurality of bus devices other than a bus manager;
identifying each queried device from configuration information therefor;
ascertaining a virtual address and a physical address for each identified device;
mapping the virtual address for each of the plurality of bus devices to the physical address
therefor; and
storing a map.

34. The method of claim 33, wherein the querying each of the plurality of bus devices includes querying at least one of a printer, a plotter, a workstation, a personal computer, a video camera, and a magnetic tape drive.

35. The method of claim 33, wherein the bus manager comprises a workstation or a personal computer.

36. The method of claim 33, wherein the storing the map includes storing the map on the bus manager.

37. The method of claim 33, wherein the mapping the virtual address for each of the plurality of bus devices to the physical address therefor includes mapping each virtual address and its respective physical address into at least one of an array, a doubly linked list, a tree, a table, and a file.

38. The method of claim 33, wherein the mapping the virtual address for each of the plurality of bus devices to the physical address therefor includes bi-directionally mapping the virtual address for each of the plurality of bus devices to the physical address therefor.

39. The method of claim 33, wherein the querying is performed only for bus devices on a first or second dynamically configurable bus experiencing a configuration event.

40. A program storage device encoded with instructions that, when executed by a computer, perform a method comprising:

querying each of a plurality of bus devices other than a bus manager;
identifying each queried device from configuration information therefor;
ascertaining a virtual address and a physical address for each identified device;
mapping the virtual address for each of the plurality of bus devices to the physical address therefor; and

storing a map.

41. The program storage device of claim 40, wherein the querying each of the plurality of bus devices includes querying at least one of a printer, a plotter, a workstation, a personal computer, a video camera, and a magnetic tape drive.
42. The program storage device of claim 40, wherein the bus manager comprises a workstation or a personal computer.
43. The program storage device of claim 40, wherein the storing the map includes storing the map on the bus manager.
44. The program storage device of claim 40, wherein the mapping the virtual address for each of the plurality of bus devices to the physical address therefor includes mapping each virtual address and its respective physical address into at least one of an array, a doubly linked list, a tree, a table, and a file.
45. The program storage device of claim 40, wherein the mapping the virtual address for each of the plurality of bus devices to the physical address therefor includes bi-directionally mapping the virtual address for each of the plurality of bus devices to the physical address therefor.

46. The program storage device of claim 40, wherein the querying is performed only for bus devices on a first or second dynamically configurable bus experiencing a configuration event.